EPA
United States
Environmental Protection
Agency

# EPA Proposes First Cleanup Plan for the Outboard Marine Corp., Inc. Plant 2 Site

**Outboard Marine Corp., Inc. Plant 2 Site**
Waukegan, Illinois December 2006

## Share your opinions

**If you are interested in the OMC Plant 2 cleanup, please attend the upcoming public meeting on Thursday, Jan. 11 at the Waukegan City Hall – City Council Chambers from 6 to 8 p.m. (details on back page.)**

**Comments on the proposed plan should be submitted from Jan. 2 – Feb. 1, 2007:**

- **Orally or in writing at the public meeting**
- **By Mail (see enclosed comment form)**
- **Electronically via the Internet at epa.gov/region5/publiccomment/**
- **Via fax to Kevin Adler at (312) 353-5541**

## For more information contact:

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U.S. Environmental Protection Agency is proposing to clean up contamination at the Outboard Marine Plant 2 site by demolishing the PCB contaminated building and digging up soil and sediment that is contaminated with PCBs and compounds commonly found in hydraulic oil called polynuclear aromatic hydrocarbons or PAHs. The most contaminated building materials and soil will be removed from the site while the least contaminated materials and soil will be consolidated on-site. Scrap metals will be cleaned and recycled.

The purpose of this proposed plan is to provide background information about the OMC site and Plant 2 specifically, describe the various cleanup options considered, and identify EPA's recommended cleanup alternative.[1] The public is encouraged to comment on this proposal which will be discussed at a public meeting on Thursday, Jan. 11 (see box to the left).

EPA, in consultation with Illinois EPA, will select a final cleanup plan for the OMC Plant 2 site. This will occur after review and consideration of information provided during the comment period and public meeting. The selected cleanup plan will be detailed in an EPA document called a record of decision. The final plan could differ from this proposed plan depending on information or comments EPA receives.

The public also is encouraged to review the supporting documents for the OMC site. The information includes documents called the remedial investigation and feasibility study and the site-wide human health and ecological risk assessment report. The remedial investigation studies the nature and extent of contamination at the site, while the feasibility study evaluates different cleanup options. The risk assessment evaluates potential health risks to people and the environment due to contamination at the site.

EPA will issue a separate proposed plan to address TCE (trichloroethylene, the most commonly found contamination in ground water) and similar contaminants found in ground water and in the ground beneath the Plant 2 building after the evaluation of cleanup methods for these contaminants is completed.

[1] *Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires publication of a notice and a proposed plan for the site remediation. The proposed plan must also be made available to the public for comment. This proposed plan is a summary of information contained in the remedial investigation, feasibility study, and other documents in the administrative record for the Outboard Marine Corporation Plant 2 site. Please consult those documents for more detailed information.*

## About the OMC site

The OMC Superfund site is located on Seahorse Drive and Waukegan Harbor in Waukegan, Ill. in Lake County (Figure 1). EPA has divided the OMC site into four parts called operable units. OU 1 is the Waukegan Harbor site; OU 2 is the Waukegan Manufactured Gas and Coke Plant (Waukegan Coke Plant) site; OU 3 is the PCB containment cells; and **OU 4** is the **OMC Plant 2** site. The city of Waukegan now owns much of the OMC site.

EPA began cleanup work at the OMC site in the early 1980s. The state had documented PCB contamination in Waukegan Harbor in the mid-1970s, and the site was placed on the first Superfund National Priorities List in October 1981.

OMC cleaned up Waukegan Harbor from 1990 to 1992 by dredging the north harbor area and placing the dredged material into former Boat Slip #3 after it was converted into a containment cell. OMC also dug up PCB-laden soil on the north side of the Plant 2 property and placed it into two newly created containment cells located on the north side of Plant 2. OMC thermally treated some of the dredged sediment prior to placement into the former Boat Slip #3 containment cell and/or one of the northern cells, removing more than 30,000 gallons of PCB-containing oil for off-site destruction. As part of the 1990 to 1992 harbor cleanup, OMC constructed Boat Slip #4 to replace former Boat Slip #3 for Larsen Marine Service. Some of the soil excavated from Boat Slip #4 contained creosote, leading to the discovery of the Waukegan Coke Plant site. The nearby Waukegan Coke Plant site is being cleaned up by several former owner/operators under EPA supervision and is not the subject of this proposed cleanup plan.

Until it declared bankruptcy in December 2000, OMC was in charge of inspecting and maintaining the three PCB containment cells. EPA and then Illinois EPA performed these tasks until mid-2005 when the city of Waukegan assumed responsibility for this work. The city of Waukegan purchased the Waukegan Coke Plant property from OMC in July 2002. After OMC legally abandoned the OMC Plant 2 property in December 2002, the city began proceedings to acquire this property, completing the acquisition in December 2005. The city plans to redevelop these former OMC properties in accordance with the Lakefront Redevelopment Plan it completed in June 2003.

The OMC Plant 2 building is a 1-million square foot facility where OMC made outboard motors from about 1948 until 2000. The building was abandoned in December 2002. From 1961 until 1972, the production lines of Plant 2 used hydraulic and lubricating oils containing PCBs. They were the sources of the PCBs in Waukegan Harbor sediment until OMC plugged its sewer lines in 1976.

In 2004, EPA studied the nature and extent of soil and groundwater contamination at the OMC Plant 2 facility. The study results were issued in an April 2006 remedial investigation report. In 2005, EPA began studying ways to clean up the Plant 2 facility that would protect human health and the environment. The results of this study were issued in December 2006 in a feasibility study report.

## Summary of site risks

A study of potential risks to public health, wildlife and the environment was done for the OMC Plant 2 site. Site soil, sediment, ground water and inside surfaces of the Plant 2 building contain levels of contaminants including PCBs and PAHs. These may present risks to people if workers, trespassers or others come into contact with them. PCBs and PAHs in site soil and sediment also may present risks to birds and small mammals as well as plants.

Ground water and soil also are contaminated with volatile organic compounds such as TCE and vinyl chloride. If this water is used for drinking, it would pose a risk to people. Once the site is redeveloped, vapor seeping into residential units from the contaminant plume area also could pose risks. EPA is studying cleanup methods for the ground water and will release a separate proposed cleanup plan in 12 to 18 months.

Figure 2 presents the locations of the affected areas on the OMC Plant 2 site.

## Summary of cleanup options

EPA considered four options for the OMC Plant 2 building and four options for the soil and sediment at the Plant 2 site. Each one was evaluated against nine criteria required by the Superfund law (see page 6). The eight options are summarized below; full details are available in the technical documents on file in the Waukegan Public Library.

## Here are details on the site cleanup options

### OMC Plant 2 Building

Option 1B: **No further action**

EPA uses the no-action option as a basis for comparison with other cleanup options. Under this option, EPA would do nothing further to remove or contain the PCBs in the OMC Plant 2 building. Since no action would be taken, this option would increase the potential for human and animal contact with the PCBs because potentially harmful levels of PCBs would remain inside the building. EPA would recommend no further use of the contaminated building areas because of the potential health risks that the PCBs may pose.

**Cost: $0**

Option 2B: **Building demolition with off-site disposal**

Under this option, EPA would demolish the PCB-contaminated portions of the OMC Plant 2 building, including affected concrete floors (but not footings). EPA would try to decontaminate as much of the structure as possible so that steel, copper wire, concrete, and equipment can be recycled. Materials that cannot be decontaminated to PCB levels below 1 part per million will be sent off-site for disposal in approved, licensed facilities. (A part per million is a tiny amount, similar to a drop of food dye in 16 gallons of water.) Soil containing PCBs above 1 ppm within a 20-foot distance from the building also would be excavated and disposed of off-site. Pre-demolition activities would include an asbestos survey and abatement, removal and disposal of mercury-containing electrical switches, and removal and disposal or recycling of machinery in the building.

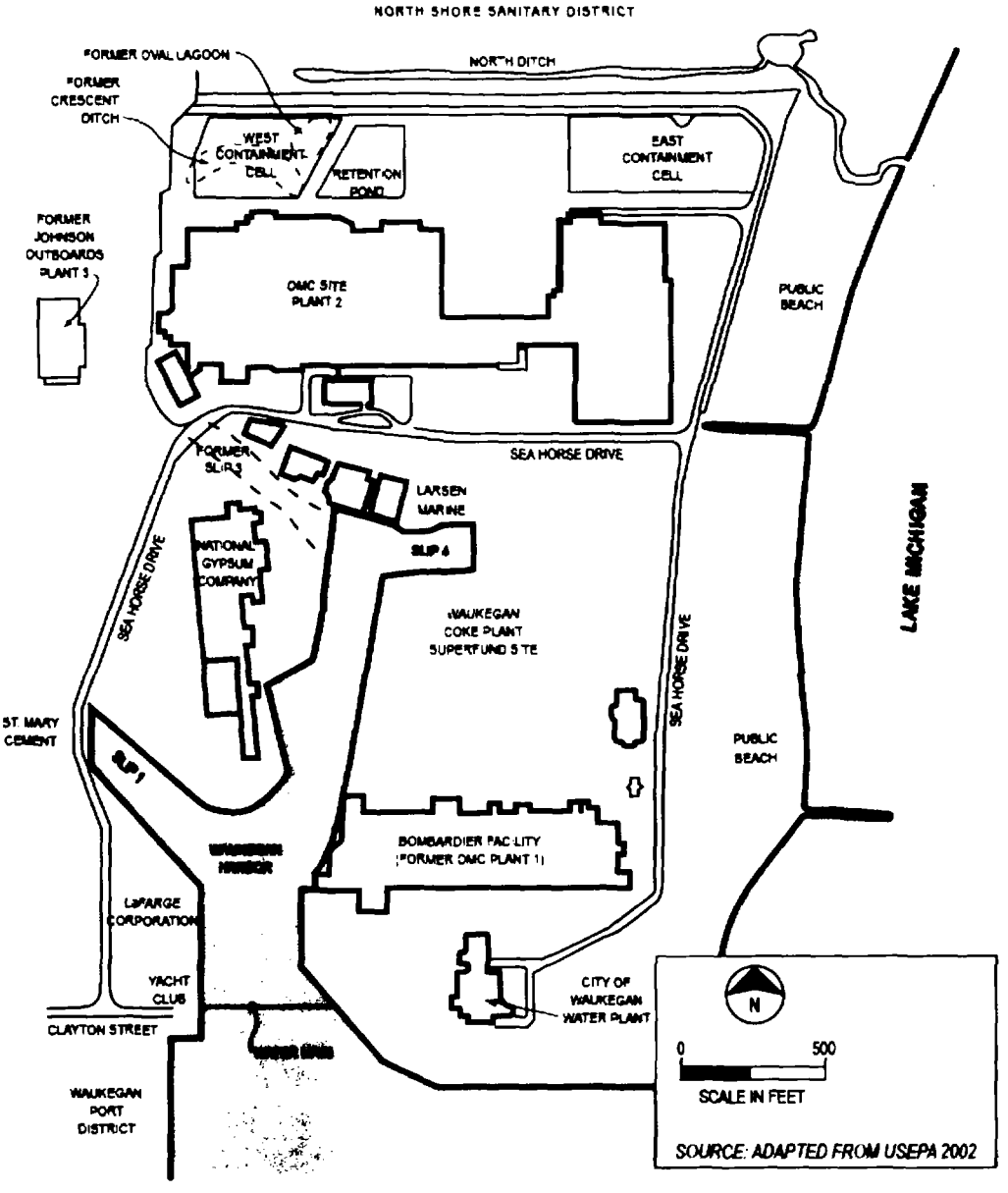



***Figure 1 - Site and Area Features***

Post-demolition activities would include sampling and analysis to demonstrate that the cleanup was successful and backfilling of clean soil or fill material into excavated areas as appropriate.

The proposed cleanup work would yield a cleaned surface area the size of the building footprint plus 20 feet around (about 40 acres), that would be ready for reuse for residential or commercial/industrial purposes. Further work would likely be necessary to clean up the ground water and contaminated areas beneath the site, but EPA would no longer need to address or monitor the cleaned up surface areas.

**Cost: $13.9 million**

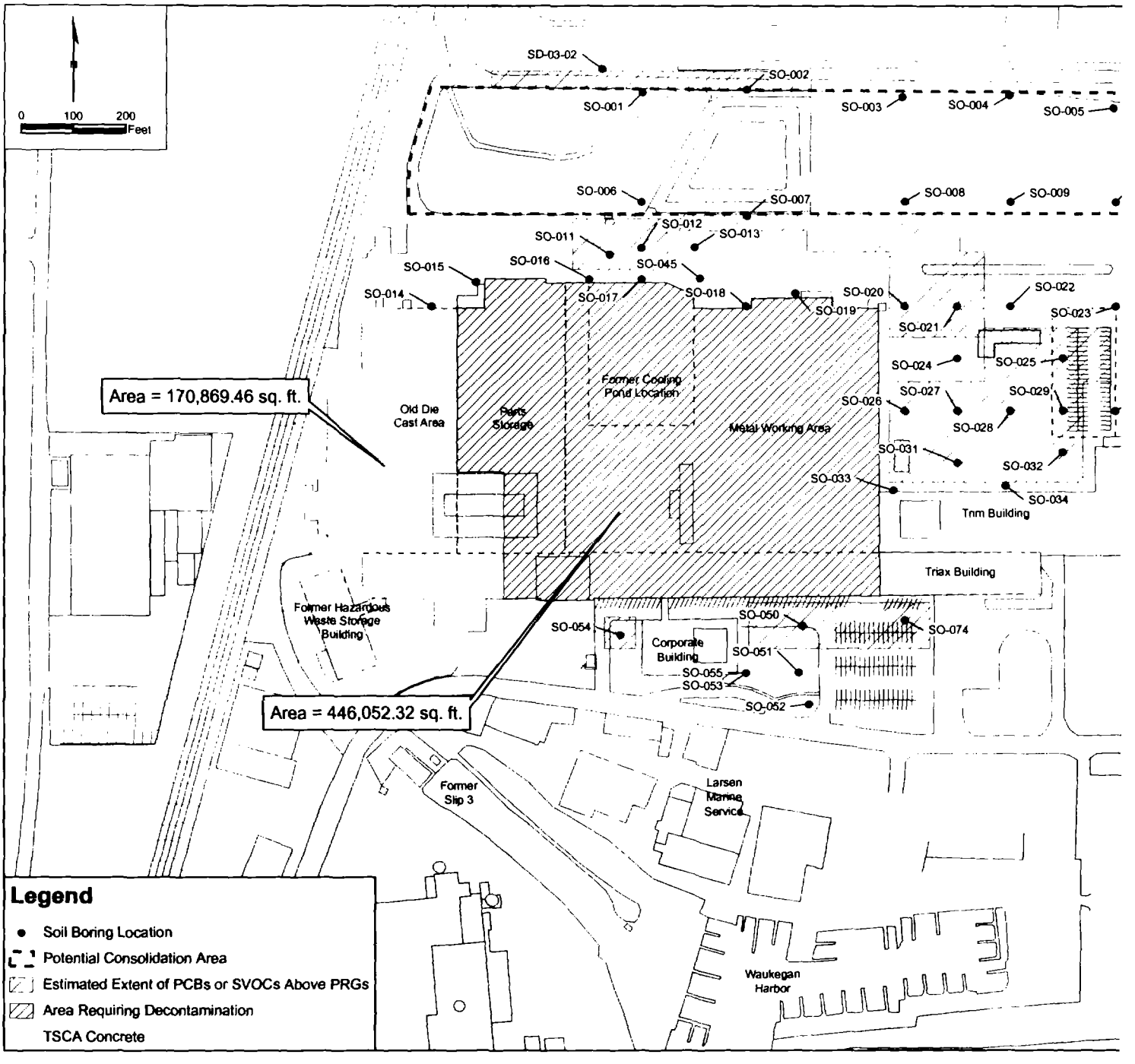


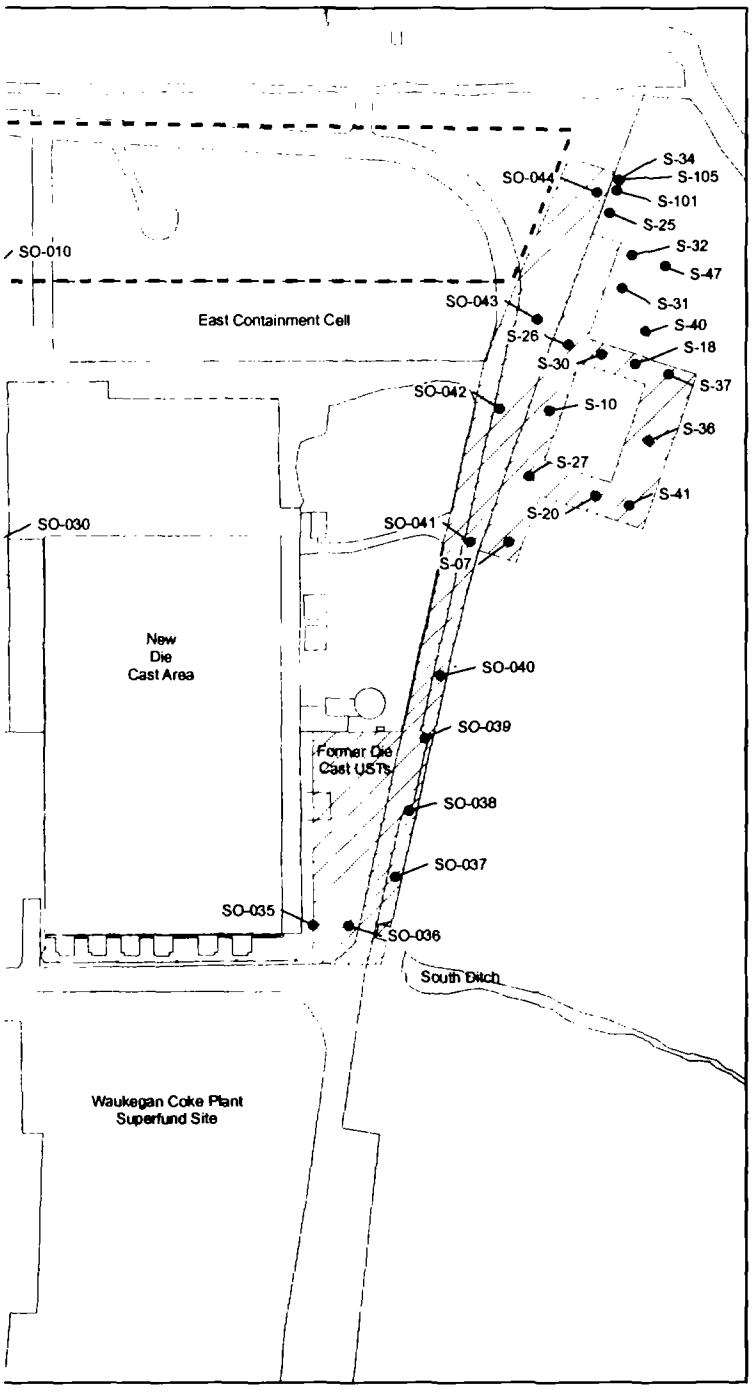

*Figure 2 - Building Material and Site Cleanup Areas*

## Option 3B: Building demolition with off-site disposal and on-site consolidation

This option is the same as Option 2B except that materials that cannot be decontaminated and exceed 50 ppm PCBs will be sent off-site for disposal in an approved, licensed facility. Materials that cannot be decontaminated and exceed 1 ppm PCBs would be consolidated on the north side of the OMC Plant 2 site between the existing PCB containment cells. EPA also would excavate and dispose of off-site and/or consolidate on-site, as in Option 2B, contaminated soil within 20 feet of the building. After materials were placed in the berm, it would be covered with 12 inches of clean soil and seeded.

Although EPA would no longer need to address or monitor the cleaned up area, EPA, the state, or the city of Waukegan would need to monitor and maintain the on-site consolidation area well into the future.

**Cost: $13.1 million**




## Option 4B: Building demolition with off-site disposal and on-site consolidation, with harbor sediment berm

[redacted]

The cleanup plan under Option 4B is identical to Option 3B, except that the on-site consolidation berm would be constructed along the northern property boundary including over the PCB containment cells. The berm would be constructed to allow for future (or concurrent) placement of Waukegan Harbor sediment should a harbor cleanup plan be enacted. After materials were placed in the berm, it would be covered with 12 inches of clean soil and seeded.

**Cost: $13.6 million**

## Soil and Sediment

### Option 1S: No action

EPA uses the no-action option as a basis for comparison with other cleanup options. Under this option, EPA would do nothing further to remove or contain the PCBs in the contaminated soil and sediment at the OMC Plant 2 site. Since no action would be taken, this option would increase the potential for human and animal contact with the PCBs because potentially harmful levels of PCBs would remain on-site. EPA would recommend no further use of the contaminated building areas because of the potential human health and environmental risks that the PCBs may pose.

**Cost: $0**

### Option 2S: Excavation of soil and sediment with off-site disposal

Under this option, EPA would dig up on-site soil and sediment with PCBs exceeding 1 ppm and/or PAHs exceeding 2 ppm and dispose of the material off-site as appropriate. Material exceeding 50 ppm PCBs would be disposed of in a federally licensed facility. After excavation is completed, the areas would be filled in with clean soil.

This option would be completed at the same time as the selected building cleanup option. The proposed cleanup work would enable the excavated soil and sediment areas of the site to be ready for reuse for residential and/or commercial/industrial purposes. Further work would be necessary to clean up the ground water and contamination under the site, but EPA would no longer need to address or monitor the cleaned up surface areas. Ecological risks would be greatly reduced as well.

**Cost: $8.2 million**

### Option 3S: Excavation of soil and sediment with off-site disposal and on-site consolidation

Under this option, EPA would excavate on-site soil and sediment exceeding 1 ppm PCBs and/or 2 ppm PAHs and dispose of the material similar to Option 3B. Soil or sediment containing 50 ppm PCBs or higher would be disposed of off-site at an approved, licensed federal facility. Soil or sediment containing less than 50 ppm

PCBs would be consolidated in a berm to be located between the two PCB containment cells on the north side of the property. After material is placed in the berm, it would be covered with 12 inches of clean soil and seeded.

This option would be completed at the same time as the selected building cleanup option. Although EPA would no longer need to address or monitor the cleaned up area, EPA, the state, or the city of Waukegan would need to monitor and maintain the on-site consolidation area well into the future.

**Cost: $6.2 million**

### Option 4S: Excavation of soil and sediment with off-site disposal and on-site consolidation, with harbor sediment berm *(EPA's recommended cleanup option)*

This option is like 3S. EPA would excavate on-site soil and sediment exceeding 1 ppm PCBs and/or 2 ppm PAHs and dispose of the material similar to 4B. The difference is that

### Site-related documents may be reviewed at:

Waukegan Public Library
Reference Desk
128 N. County St.
Waukegan

EPA Region 5 Records Center
77 W. Jackson Blvd., 7th Floor
Chicago
Weekdays 8 a.m. - 4 p.m.

Certain EPA information, including this fact sheet, can be reviewed electronically at: www.epa.gov/region5/sites/outboardmarine

An administrative record, which contains detailed information upon which the selection of a cleanup plan will be based, is also located at the Waukegan Public Library and at the EPA Chicago office.

## Evaluating the options

EPA used the following nine criteria to evaluate each of the options. The table on Page 7 compares each one against these criteria:

**1. Overall Protection of Human Health and the Environment** addresses whether an option adequately protects human health and the environment. This criteria can be met by reducing or eliminating contaminants, or by reducing exposures to them.

**2. Compliance with Applicable or Relevant and Appropriate Requirements,** referred to as ARARs, assures that each project complies with federal, state and local laws and regulations.

**3. Long-term Effectiveness and Permanence** evaluates how well an option will work in the long term, including how safely remaining contaminants can be managed.

**4. Reduction of Toxicity, Mobility or Volume through Treatment** addresses how well the option reduces the harmful effects, movement and amount of contaminants.

**5. Short-term Effectiveness** is how quickly the option can be done, as well as its potential harm to workers, residents and the environment.

**6. Implementability** evaluates the technical difficulty in building and operating the cleanup system and whether materials and services are available to carry out the project.

**7. Cost** includes estimated capital or start-up costs. An example is the cost of buildings, treatment systems and monitoring wells. It also considers costs to implement the cleanup and operate and maintain it over time. Examples include laboratory analysis, repairs and personnel hired to operate equipment. A cleanup is considered cost effective if its costs are proportionate to its overall effectiveness.

**8. State Acceptance** is whether the state environmental agency, in this case Illinois EPA, agrees with EPA's recommended option.

**9. Community Acceptance** evaluates how well the community near the site accepts the option. EPA and Illinois EPA will evaluate community acceptance after the public comment period.

soil or sediment containing less than 50 ppm PCBs would be consolidated in a berm to be located along the northern property boundary including over the PCB containment cells. The berm would be constructed to allow for future (or concurrent) placement of Waukegan Harbor sediment should a harbor cleanup plan be enacted. After material is placed in the berm, it would be covered with 12 inches of clean soil and seeded.

This cleanup option would be completed at the same time as the selected building cleanup alternative.

**Cost: $6.6 million**

## How do the options compare?

EPA evaluated the cleanup options against seven of the nine criteria. The state and community acceptance criteria will be evaluated after EPA receives public comments. The degree to which the cleanup options meet the evaluation criteria and how they compare to other cleanup options are discussed below and illustrated in the chart below.

Options 1B and 1S (no-action) are not protective of people and the environment and would not meet ARARs.

Options 2B, 2S, 3B, and 3S, when completed, would protect people and the environment over the long term by removing potentially harmful levels of contaminants from the site, meet ARARs, and would be easily implemented over a short timeframe. Options 3B and 3S, however, would leave materials on-site in a containment area.

Options 4B and 4S are similar in scope to Options 3B and 3S, but could result in a cost savings by providing a containment area for Waukegan Harbor sediment should the harbor be cleaned up (under a separate cleanup plan).

None of the options would use treatment technologies to treat the PCB contaminants; however, the action options would use treatment methods to reduce the volume of PCB-contaminated materials and allow for recycling of steel, copper wire, and perhaps equipment from the OMC Plant 2 building.

## EPA's recommended option

Based on the analysis completed to date, EPA believes that the best cleanup options for the Plant 2 building and soil and sediment at the OMC Plant 2 site are Alternatives 4B and 4S. In 2007 or early 2008, EPA plans to present a second proposed cleanup plan to clean up the contaminants in ground water and the contamination underneath the site.

**Evaluation Criteria for the OMC Plant 2 Site**

| Criterion | 1B/1S | 2B/2S | 3B/3S | 4B/4S* |
|---|---|---|---|---|
| Overall protection of human health and the environment | □ | ■ | ■ | ■ |
| Meets ARARs | □ | ■ | ■ | ■ |
| Long-term effectiveness and permanence | □ | ■ | ■ | ■ |
| Reduction of toxicity, mobility, or volume through treatment | □ | □ | □ | □ |
| Short-term effectiveness | □ | 16-20 months to complete | 17-20 months to complete | 17-20 months to complete |
| Implementability | ■ | ■ | ■ | ■ |
| Cost | None | $22.1 million | $19.3 million | $20.2 million |
| State acceptance | Will be evaluated after the public comment period | | | |
| Public acceptance | Will be evaluated after the public comment period | | | |

| ■ Fully meets criteria | □ Partially meets criteria | □ Does not meet criteria |
|---|---|---|
| *EPA's recommended options | | |

EPA PROPOSES FIRST CLEANUP PLAN FOR
THE OUTBOARD MARINE PLANT 2 SITE

United States
Environmental Protection
Agency

Region 5
Office of Public Affairs (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604

FIRST CLASS

# You're Invited to a Public Meeting about the Proposed Cleanup of the Outboard Marine Plant 2 Site

**Thursday, Jan. 11, 2007**
**6 - 8 p.m.**
**Waukegan City Hall - City Council Chambers**
**100 N. Martin Luther King Jr. Ave.**
**Waukegan**

At the meeting, EPA will give a presentation to explain the proposed plan, and you will have a chance to comment for the record. You also may submit your written comments at the meeting.

If you need special accommodations for the public meeting, contact Mike Joyce at the contact information on Page 1 by Jan. 4.

If you have scientific and technical questions about the PCB cleanup, you may contact EPA Remedial Project Manager Kevin Adler at the contact information on Page 1.

Comments may be faxed to Kevin Adler at (312) 353-5541 or submitted via the Internet at: epa.gov/region5/publiccomment/

## Comment Sheet

U.S. Environmental Protection Agency is interested in your comments on the proposed cleanup plan for the OMC Plant 2 site. EPA will consider public comments before selecting a cleanup action for the Plant 2 site. Please use the space below to write your comments, then fold and mail this form. Comments must be postmarked by Feb. 1, 2007. If you have general questions, contact Mike Joyce at (312) 353-5546, or through EPA's toll-free number at (800) 621-8431. Those with electronic capabilities may submit their comments to EPA via the Internet at epa.gov/region5/publiccomment.

Name _____

Address _____

City _____ State _____

Zip _____

Fold on Dashed Lines, Tape, Stamp, and Mail

Name _____

Address _____

City _____ State _____

Zip _____

Place Stamp Here

Kevin Adler
Remedial Project Manager
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77 W. Jackson Blvd.
Chicago, IL 60604-3590